J. Klott, BLM, in litt. 1995

BLM and FWS 1995

August 9, 1995

Pat Coffin
U.S. Fish & Wildlife Service
Reno Field Office
4600 Kietzke Lane, Bldg. C125
Reno, NV 89502

Dear Pat,

Here are notes from the bull trout inventory conducted on August 7 and 8, 1995 by the Boise District BLM and Idaho Field Office U.S. Fish & Wildlife Service. A quick explanation of the maps is probably needed. On the maps the pink highlights are sampling areas, area behind the yellow highlight is BLM administered, area behind the green is administered by Humbolt National Forest, enclosed white areas are private lands. I did not denote state lands (usually sections 16 and 36).

For your information I am sending copies of the notes to Bruce Zoellick, Trish Klahr (USFWS Boise) and Gene Weller (Nevada Division of Wildlife Elko).

Sincerely,

Jim Klott

Jim Klott

Bull Trout Survey in the Jarbidge Resource Area

On August 7 and 8 a bull trout survey was conducted by personnel of Boise District BLM (Bruce Zoellick, John Nelson, and Jim Klott) and the Idaho Field Office of the Fish & Wildlife Service (Trish Klahr). Areas surveyed included Jack Creek below the culvert, Deer Creek, West Fork of the Jarbidge River, and East Fork of the Jarbidge River. Fish were identified to species by personnel snorkeling pools and riffles. In addition to fish species other information recorded included water temperature, air temperature, and length of area surveyed. Only one bull trout was detected during the surveys and it was in the plunge pool below the Jack Creek culvert. Water temperatures were about 2.0°C cooler this year on August 7, 1995 compared to July 7, 1994 in the West Fork of the Jarbidge River. Water in Jack Creek was slightly more than 3.0°C cooler in August 7, 1995 compared to July 17, 1994. Colder water temperatures in 1995 are most likely due to more snow remaining at the higher elevations.

Flooding during the May 1995 caused substantial movement of sediment and rock in the Jarbidge River system. Impacts appeared to be somewhat greater in the West Fork of the Jarbidge compared to the East Fork of the Jarbidge. Generally, resource damage to the fish habitat appeared to be less where there was protection of banks by woody vegetation compared to areas where banks were only rock. The woody vegetation appeared to help stabilize soil, reduce water velocity along the bank, and trap some debris. In some areas debris was deposited over 5 feet above the present water level.

Jack Creek
Water Temperature 9°C, Air Temperature 27°C, Time 2:21 MDT. Results 1 bull trout, several redband trout. The height from the bottom of the culvert to the surface of the pool was measured at 39". A number of rocks have been deposited immediately below the culvert so that the distance from the culvert to deep water is now about 48". In the opinion of the BLM fisheries biologist, the Jack Creek culvert is now a total fish barrier. In July of 1994, the deep pool was located directly below the culvert and the height from the bottom of the culvert to the pool surface was about 26 inches. Water in the West Fork of the Jarbidge River was 12.2°C at the time the water temperature in Jack Creek was taken. Water temperature below the confluence of Jack Creek and the West Fork of the Jarbidge River was 11.1°C. Water temperature at Jack Creek was 12.1°C on July 12, 1994

Deer Creek
Deer Creek was surveyed on August 7, 1995. Only portions of Deer Creek on BLM lands administered by the Jarbidge Resource Area were checked. The water temperature was 11.7°C and air temperature was 24.4°C at the time the survey was initiated (4:15 PM MDT). At the completion of the survey of Deer Creek the time was 5:47 PM MDT, the air temperature was 21.7°C and the water temperature was 10.6°C. Because this area had never been surveyed numbers of fish were recorded by species. Additionally, areas surveyed were classified by channel type, pool length, width, and depths were recorded for most sites surveyed on Deer Creek. Tail depth refers to the deepest depth at the most downstream portion of a pool, whereas, max depth refers to the maximum depth within a pool.

The vegetation along Deer Creek is quite diverse with a large variety of shrubby species present. In many areas the shrubs and trees provided shade to over the bulk of the creek channel. Dominant shrubs and trees included currant (3 species), willow (3 species), aspen, black cottonwood, dogwood, rose, chokecherry, thimbleberry, Western juniper, elderberry, and alder. Herbaceous species included avens, Lewis monkey-flower, yellow monkey-flower, horsetail, fireweed, butterweed, goldenrod, cinquefoil, sedge (3 species), bulrush, bluegrass, ryegrass, swordleaf rush, mannagrass, bentgrass, and western coneflower. There is some evidence of past livestock grazing

(skeleton and droppings), but no evidence of livestock use during the current grazing season.

A total of 335 feet of Deer Creek was actually snorkeled over a 0.2 mile distance. Two step pool complexes, 3 pool/riffle complexes, and 7 pools were sampled. A total of 61 redband trout and no bull trout were observed in the 12 sites surveyed. Site specific information are presented in Table 1. Trees are a relatively minor component of the vegetation generally do not exceed 7 inches in diameter. Large woody material (logs) were generally lacking in this drainage. Deep pools (over 30 inches) were lacking. Because of the lack of large woody debris and deep pools, Deer Creek is believed to have lower potential as bull trout habitat than Jack Creek.

West Fork of the Jarbidge River

On August 8, 1995 portions of the West Fork of the Jarbidge and the East Fork of the Jarbidge River were snorkeled for bull trout. Only the presence of fish by species were recorded. On the West Fork of the Jarbidge River 6 sites were checked. The first 5 were approximately 5.9 miles south of the Idaho/Nevada state line, the final site was located about 0.45 miles north of Buck Creek (Idaho) in the same location surveyed in 1994 (Site 6). The first survey started at 10:33 AM [MDT] when visibility was improved by having sunlight on the water. The air temperature was 14.4°C, whereas the water temperature was 7.8°C. A total of 292 feet were snorkeled in a 0.1 mile segment of the West Fork of the Jarbidge River south of the Idaho/Nevada border and 159 ft in Idaho north of Buck Creek. The air temperature had increased to 23°C and the water temperature had increased to 14°C. Fish species observed are given in Table 2.

The water temperature was 2.0°C cooler in August 7, 1995 than on July 7, 1994 when a bull trout was observed at Site 6. Woody vegetation consists primarily of willows (3 species), rose, dogwood, and some currant. Trees are less common with Western juniper being the most abundant species. A few cottonwood and limber pine are sparsely scattered along the river. Because of the lack of trees the bulk of the West Fork of the Jarbidge River is exposed to sunlight during the late morning and well into the afternoon. Floods in May 1995 washed out portions of the road between the Nevada stateline and Deer Creek. The flood event desposited some woody debris in the channel as well as soil and rock from the road. Elko County has since repaired flood damage to the road. Portions of this road will probably be damaged by flood events in the future primarily because of topographic limitations. In a few locations the road surface is only 3 to 4 feet above the present high water mark.

Water from Buck Creek was very dark in color due to silt and decreased the visibility between the confluence of Buck Creek and the West Fork Jarbidge River to the confluence of the East and West Forks of the Jarbidge River. The water temperature in Buck Creek was 9.4°C, whereas the water in the West Fork of the Jarbidge River had warmed to 13.5°C by 12:34 PM [MDT]. Silt in Buck Creek was apparently coming from work in wet meadows located on private land about 3 miles up stream.

East Fork of the Jarbidge River

From the confluence of the East and West Forks of the Jarbidge River up the East Fork of the Jarbidge was snorkeled in afternoon of August 8, 1995. Three sites were snorkeled (the confluence, 0.3 miles downstream of Murphy Hot Spring and 0.4 miles upstream of Murphy Hot Spring. The air temperature at the confluence was 24°C at 2:24 PM [MDT]. Water temperature in the East Fork of the Jarbidge River was 16.5°C, whereas, it was 15.5°C in the West Fork of the Jarbidge River. The water temperature was 16.5°C upstream Murphy Hot Spring and 17.0°C downstream of Murphy Hot Spring. Pool sizes and depths were not measured on the East Fork of the Jarbidge. A total of six fish species were detected at the points sampled (Table 3).

Vegetation along the East Fork of the Jarbidge River is similar to the West Fork. Based on reports flood damage to the road along the East Fork of the

Jarbidge River did not seem as severe as in the West Fork. A number of cottonwood trees along the banks of the river in the vicinity of Murphy Hot Spring were washed out. An old bridge on the downstream side of town was severely damaged. Some residents in town had to sand bag around their property to prevent flood damage.

Locations of all the sites checked are shown on the attached maps.

CC Gene Weller, Nevada Division of Wildlife
Pat Coffin, U.S. Fish & Wildlife Service, Reno
Trish Klahr, U.S. Fish & Wildlife Service, Boise
Bruce Zoellick, Boise BLM

Table 1. Physical characteristics and numbers of fish for sites surveyed for **bull trout** in Deer Creek, Nevada.

Site 1. Riffle/pool: length 30 ft, width 12 ft, max. depth not measured, tail depth not measured: 9 redband trout

Site 2. Pool/riffle complex: length 54 ft, width 12 ft, max. depth not measured, tail depth not measured: 11 redband

Site 3. Riffle: length 50 ft, with 9 ft, max. depth 7 inches: 1 redband

Site 4. Pool: length 18 ft, width 12 ft, max. depth 16 inches, tail depth 8 inches: 3 redband

Site 5. Step pool complex: length 60 ft, width 15 ft, max. depth 20 inches, tail depth 10 inches: 6 redband

Site 6. Pool: length 11 ft, width 10 ft, max. depth 15 inches, tail depth 11 inches: 1 redband

Site 7. Pool: length 12 ft, width 8 ft, max. depth 24 inches, tail depth 9 inches: 4 redband

Site 8. Step pool complex: length 24 ft, width 10 ft, max. depth 18 inches, tail depth 9 inches: 12 redband

Site 9. Pool: length 14 ft, width 6 ft, max. depth 24 inches, tail depth 7 inches: 5 redband

Site 10. Pool: length 12 ft, width 7 ft, max. depth 18 inches, tail depth 13 inches: 1 redband

Site 11. Step pool: length 24 ft, width 8 ft, max. depth 16 inches, tail depth 8 inches: 4 redband

Site 12. Pool: length 26 ft, width 9.5 ft, max. depth 15 inches, tail depth 10 inches. 4 redband.

Table 2. Physical parameters and fish species detected in the West Fork of the Jarbidge River.

Site 1. Pool: length 36.5 ft, width 19.3 ft, max depth 35 inches, tail depth 18 inches: Fish species: redband trout, rainbow trout*, mountain whitefish
Site 2. Pool/riffle: length 54 ft, width 22.4 ft, max depth 32 inches, tail depth 18 inches: Fish species: redband trout, rainbow trout*
Site 3. Pool: length 29 ft, width 20.7 feet, max depth 29 inches, tail depth 12 inches: Fish species: redband trout, rainbow trout*
Site 4. Pool: length 58 ft, width 16.8 ft, max depth 44 inches, tail 18 inches: Fish species: redband trout, rainbow trout*, mountain whitefish
Site 5. Pool/riffle: length 114 ft, width 25.8 ft, max depth 58 inches, tail depth 13 inches: Fish species: redband trout, mountain whitefish, rainbow trout*
Site 6 (Idaho). Pool/riffle complex: 159 ft, width 31.2 ft, max depth 43 inches, tail depth 17 inches: Fish species: redband trout, rainbow trout*, sculpin, dace, mountain whitefish

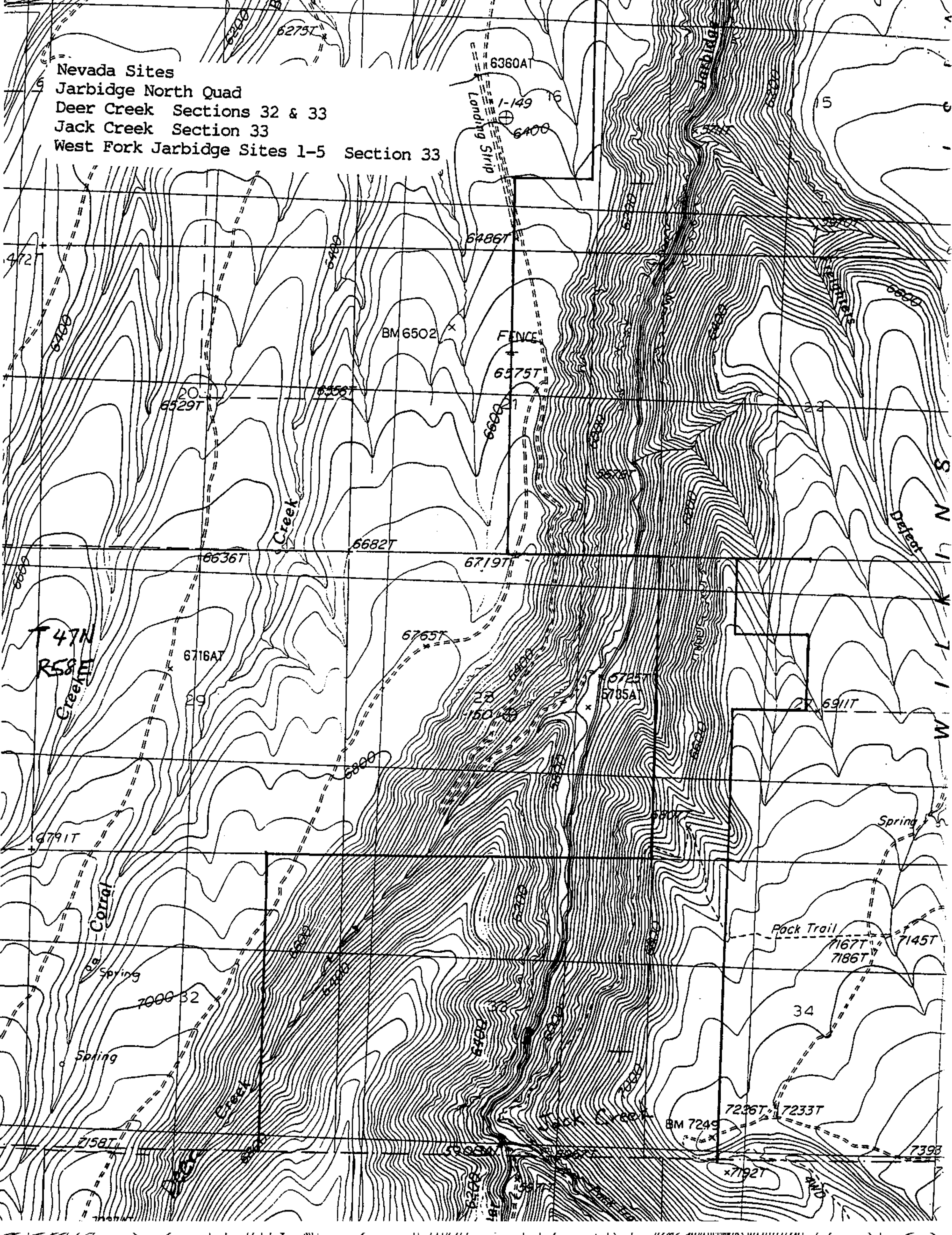
* rainbow trout are probably fish stocked by Nevada Division of Wildlife (NDOW)

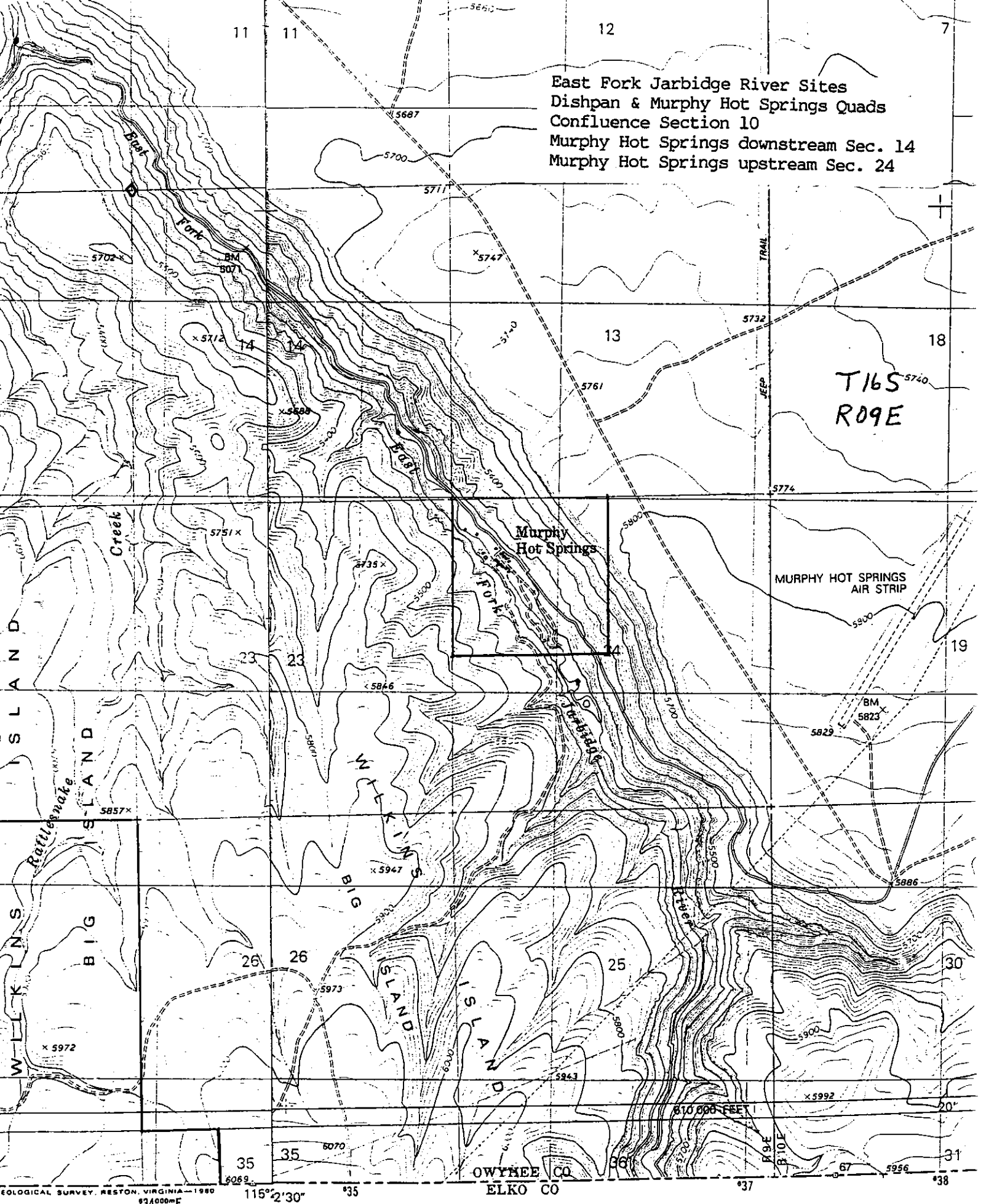
Table 3. Fish species observed in the East Fork of the Jarbidge River.

	Fish Species					
Location	RbT	MW	Sc	SD	LnD	BlS
Confluence	x	x	x	x	x	x
Downstream Murphy	x	x	x	x		x
Upstream Murphy	x	x	x	x		x

RbT = Redband Trout
MW = Mountain Whitefish
Sc = Sculpin
SD = Speckled Dace
LnD = Long-nose Dace
BlS = Bridge-lip sucker

Nevada Sites
Jarbidge North Quad
Deer Creek Sections 32 & 33
Jack Creek Section 33
West Fork Jarbidge Sites 1-5 Section 33





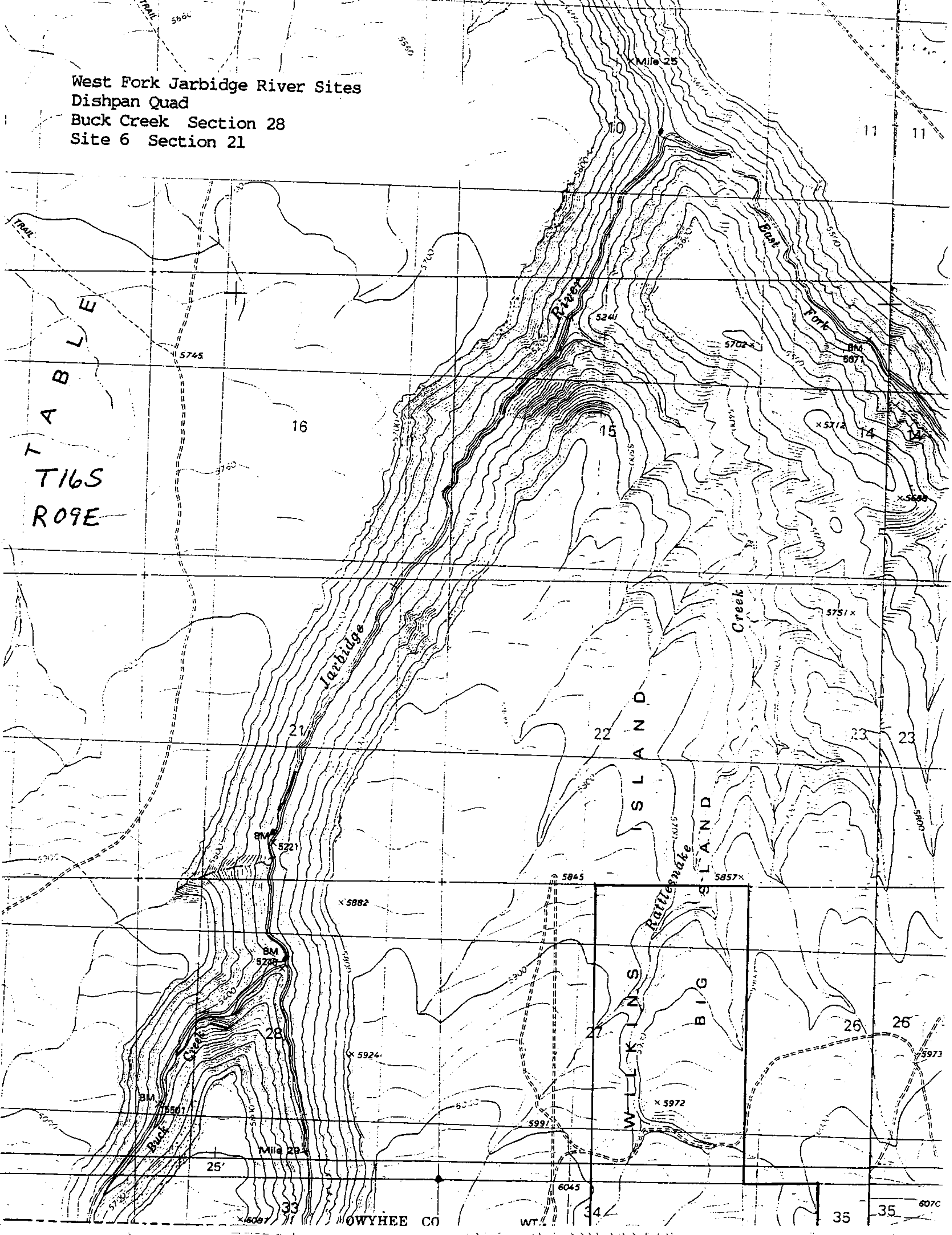
OAD CLASSIFICATION

Light-duty road, hard or improved surface

Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial



West Fork Jarbidge River Sites
Dishpan Quad
Buck Creek Section 28
Site 6 Section 21
TABLE
T16S
R09E
TRAIL
Mile 25
East Fork
Jarbidge River
BM 5221
BM 5208
BM 5501
Buck Creek
Mile 29
ISLAND
BIG ISLAND
Rattlesnake
Creek
WILKINS
OWYHEE CO